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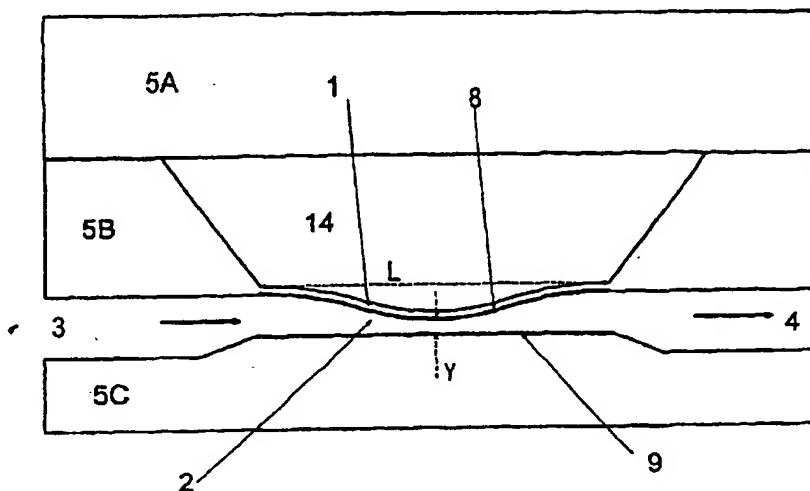
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(54) Title: MEMS PILOT VALVE



(57) Abstract: Valve, for e.g. a pilot valve in an IP regulator, realised for example in a MEMS-structure, comprising a fluid inlet (3) and a fluid outlet (4) coupled by a fluid channel (2), all of which are defined by walls and structures (5) produced by micromachining of glass and or silicon. An actuator (1,8,9) can be set to at least two different positions in order to vary the flow cross section of the fluid channel (2). The geometries of the fluid inlet, outlet and channel are adapted for preventing the flow from changing its direction so sharply that a significant portion of contaminating droplets and or particles in the flow hit the walls of structures, as given in any arrangement according to or between the following two extremes: i) flow outlet is perpendicular to the flow inlet and the outlet dimension is larger than a critical dimension,  $L_{crit}$  estimated according to a given formula and/or as simulated in a CFD-tool (Computational Fluid Dynamics), and ii) flow outlet and flow channel is generally parallel to flow inlet giving a substantially unidirectional flow pattern.

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